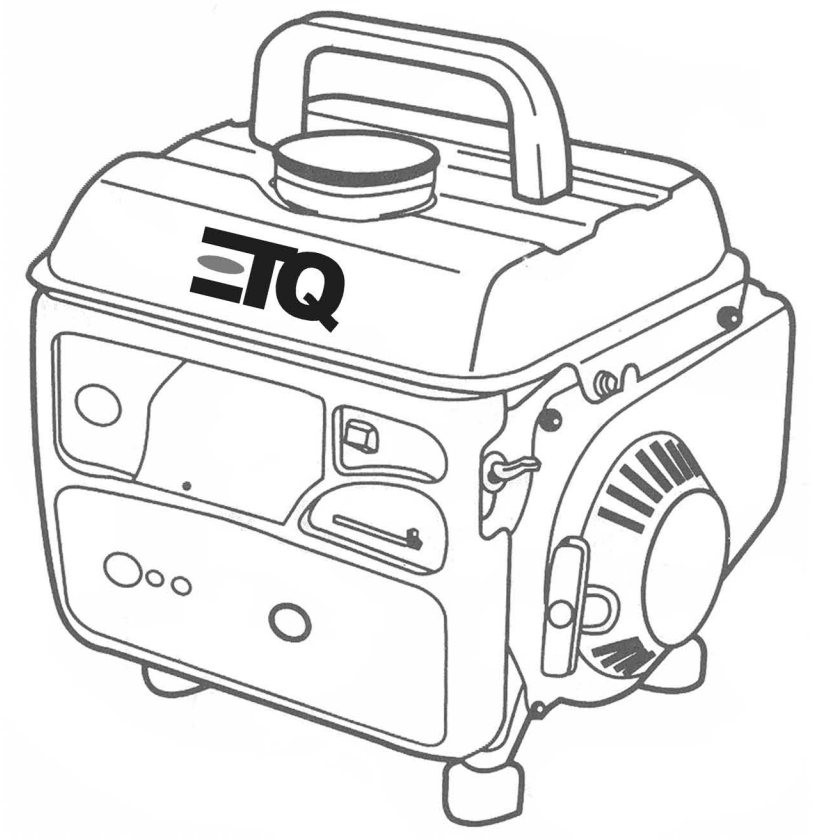
Mode d'emploi
Générateur
Modèle TG1200

Owner's Manual
Generator
Model TG1200



ENGLISH

PREFACE

Thank you for purchasing products from EASTERN TOOLS & EQUIPMENT, INC. We appreciate your business. The following manual is only a guide to assist you and is not a complete or comprehensive manual of all aspects of maintaining and repairing your generator. The equipment you have purchased is a complex piece of machinery. We recommend that that you consult with a dealer if you have doubts or concerns as to your experience or ability to properly maintain or repair your equipment. You will save time and the inconvenience of having to go back to the store if you choose to write or call us concerning missing parts, service questions, operating advice, and/or assembly questions. Our gasoline generators have some of the following features:

- Lightweight construction
- Air cooled
- Two-stroke gasoline internal combustion engine
- Recoil starter
- Thermal pushbutton reset circuit protector
- AC and DC outputs

The ETQ air-cooled gasoline generators are widely used when electrical power is scarce. Our generators provide a portable mobile solution in supplying power for field operations during project construction.

This manual will explain how to operate and service your generator set.

If you have any questions or suggestions about this manual, please contact your local dealer or us directly. ***Consumers should notice that this manual might differ slightly from the actual product as more improvements are made to our products. Some of the pictures in this manual may differ slightly from the actual product as well. Eastern Tools and Equipment, Inc. reserves the right to make changes at any time without notice and without incurring any obligation.***

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TECHNICAL SPECIFICATIONS AND DATA

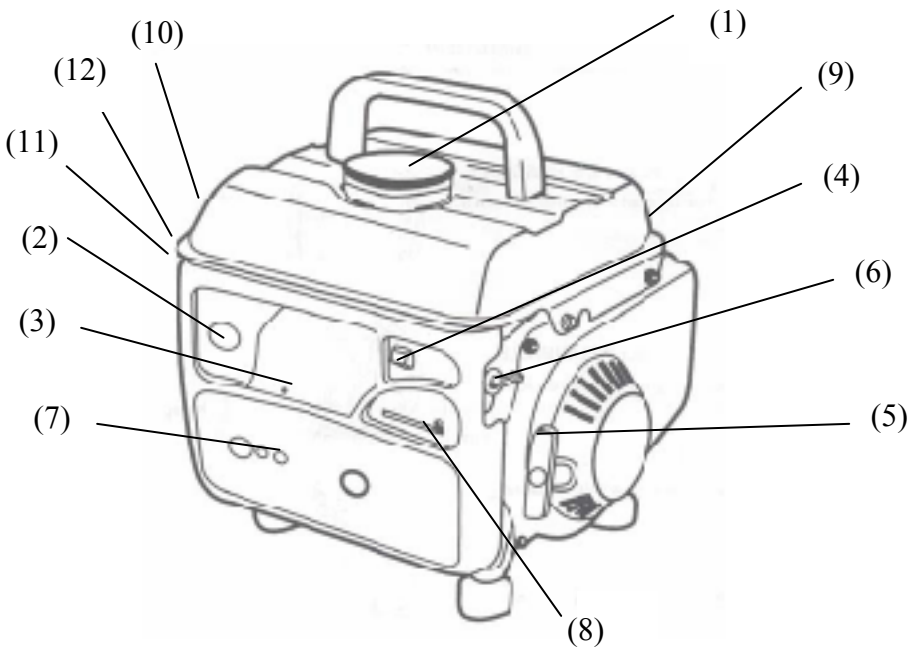
Technical specifications

Item \ Model		TG1200
Generator	Type	Brushless, revolving magnetic field, self –exciting, 2-pole, single-phase
	Voltage regulator	Capacitor
	Frequency 60	Hz
	Rated voltage	120 V
	Maximum output	1200 Watts
	Rated Output	1000 Watts
	Power factor	cos • = 1.0
Gasoline Engine	Engine type	2-Stroke
	Displacement	63 Cubic centimeters (3.84 Cubic Inches)
	Fuel tank capacity	3.8 liters (1.0 Gallon)
	Continuous operating hours	5.5 Hours
	Fuel Type	Premix 50 cups of Gasoline to one cup of 2 stroke oil
	Ignition system	Transistorized ignition (TCI)
	Starting system	Recoil manual start
Unit	Dimensions (LxWxH)	31.75 x 36.53 x 36.83 cm (12.5” x 14.38” x 14.5”)
	Dry weight	18.60 kg (Approx 41 lbs)

EQUIPMENT DESCRIPTION & KNOWING YOUR GENERATOR

Please read this manual and follow the procedures covered in this manual. Become familiar with the generators functions, applications, and limitations.

Below is a diagram of the locations of the various controls and functions of the generator



(1) FUEL TANK CAP
(2) AC RECEPTACLE
(3) THERMAL CIRCUIT PROTECTOR
(4) ENGINE SWITCH
(5) RECOIL STARTER
(6) FUEL VALVE
(7) AIR CLEANER
(8) CHOKE ROD
(9) SPARK PLUG
(10) GROUND TERMINAL
(11) DC TERMINALS
(12) DC CIRCUIT PROTECTOR

WARNING: DO NOT exceed the generator's wattage / amperage capacity. Our products are continuously being changed and improved. Every effort has been made to ensure that information in the manual is accurate and up to date. However, we reserve the right to change, alter or otherwise improve the product and this manual at any time without prior notice.

SAFETY PRECAUTIONS

In order to ensure safety for the consumer, please carefully follow instructions on being careful with the generators.

Operate the generator ONLY outdoors. Never run the generator indoors as the engine gives off poisonous carbon monoxide, an odorless, and colorless gas. Inhaling carbon monoxide will cause nausea, fainting or death. Also, keep the generator at least 3 feet away from flammable matter for adequate ventilation.

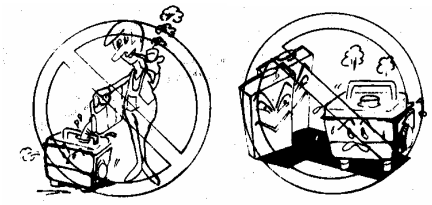
DANGER
Always properly ground the generator. Failing to do so can result in electrocution. Please refer to **"PROPERLY GROUNDING YOUR GENERATOR"**

ELECTRIC SHOCK AND SHORT CIRCUIT

In highly conductive area such as metal decking or steel work, use a ground fault circuit interrupter (GFCI). Never touch the generator if the generator is wet. Also, never touch the generator if your hand is wet. Never operate your generator if the weather conditions call for any type of precipitation such as rain, snow, or fog.

PREVENTION FROM ACCIDENTAL BURNS

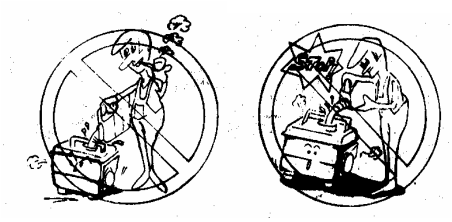
Never touch the muffler and its cover when the engine is running. Never touch the muffler and cover after the engine has been used, as the muffler remains hot for a good period of time.



REFUELING PRECAUTIONS

Gasoline and its vapors are extremely flammable. Do not smoke near gasoline and keep gasoline away from generator while the generator is running. When adding fuel, turn the generator off and let it cool at least 2 minutes before removing the gas cap. Loosen gas cap slowly to relieve the pressure in the tank.

Fill fuel tank outdoors and never overfill the tank.



When storing gasoline or equipment with fuel in tank.

Store away from appliances or equipment that have a pilot light or other ignition sources because they can ignite gasoline vapors.

ENGINE SAFETY PRECAUTIONS

Do not touch hot surfaces. Allow equipment to fully cool down before touching.

After the generator has been run, the engine produces heat. The temperatures of the muffler and nearby areas can reach or exceed 160^0 F. Severe burns will occur on contact with skin.

Do not modify the generator in any way. The generator supplies the rated voltage and rated frequency at its governed speed.

GENERATOR SAFETY

Never overload your generator as this can damage your generator or the electrical devices connected to it.

Do not start generator with electrical devices connected to it. Start the generator first and after the speed of the generator stabilizes, electrical loads can be applied to it.

When connecting electrical loads, make sure the devices are “OFF” first before connecting them. Keep the same concept when disconnecting electrical devices, make sure all devices are in the “OFF” position before disconnecting.

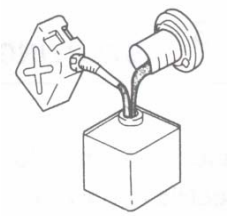
Operate the generator on level surfaces only. Inclined surfaces reduce the effective lubrication of the engine.

Do not expose the generator to excessive moisture, dust, dirt, or corrosive vapors.

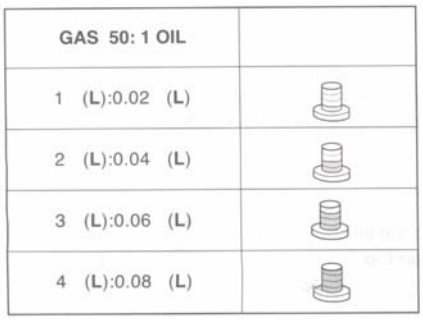
PREPARATION BEFORE OPERATION

Before starting the generator, verify the following conditions.

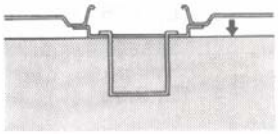
GASOLINE PREMIX



- Add premixed oil and gasoline and never fill the fuel tank indoors. Also, be sure to install the fuel tank cap on tight after filling. Premix ratio should be 50 parts gasoline and 1 part 2 stroke oil. Use fuel tank cap to measure oil.



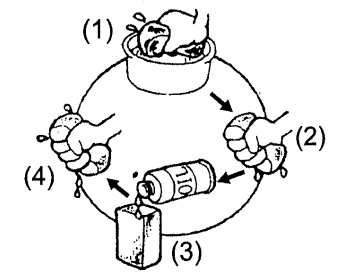
- DO NOT overfill the fuel tank. Always allow room for fuel expansion.



- Never fill the fuel tank when the engine is running or hot. Allow the unit to cool for two minutes before refueling. DO NOT light a cigarette or smoke when filling the fuel tank.

AIR CLEANER

- Unscrew the air cleaner cover and remove the air cleaner cover.
- Check the air cleaner element to be sure they are clean and in good condition.
- If the air filter is dirty, remove and clean the element.
  - Wash in solvent
  - Squeeze
  - Soak oil
  - Squeeze dry



- Reinstall the air cleaner element and secure the cover by setting the cover spring.

HANDLE BAR INSTALLATION

- Attain the screw driver and handle bar from the package.

- Place the bolts in the handle bar. Make sure the gasket is properly mated between the fuel tank and handle bar. Put handle bar on top of the fuel tank with matching holes.

- Firmly tighten the screws to the fuel tank securing the handle bar to the fuel tank.

GROUNDING THE GENERATOR

The National Electric Code requires that the frame of the generator and the external electrically conductive parts of the generator be connected to an approved earth ground. Local codes may differ and require other grounding specifications. For this purpose, please use a ground wire that attaches from the frame to the generator unit. NOTE: The grounding wire is not included with the unit and could easily be fabricated by the end user or local industrial supply store.

Using a No. 12 AWG (American Wire Gauge) stranded copper wire to the frame and to an earth-driven copper or brass grounding rod provides sufficient safety against shock. However, local codes may differ. Contact a local electrician to find out specifications for grounding your generator.

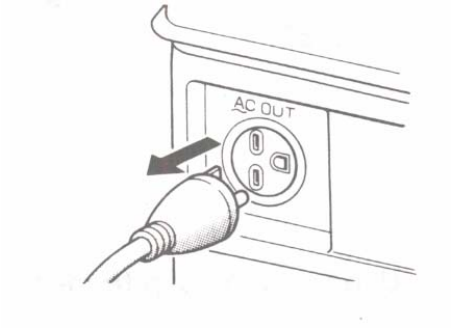
Note: Grounding helps prevent electrical shock if a ground fault condition exists in the generator or in faulty connected electrical devices. Also, because the generator is rotating at high speeds, static electricity tends to buildup within the unit. Grounding helps dissipate the static electricity buildup often builtup in ungrounded devices.

OPERATING THE GENERATOR

STARTING THE ENGINE

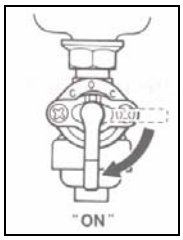
Before starting the engine, verify that the gasoline mix is full, and air filter is in place. Also, disconnect any load from the AC receptacle.

Figure 1. *Disconnecting electrical devices*



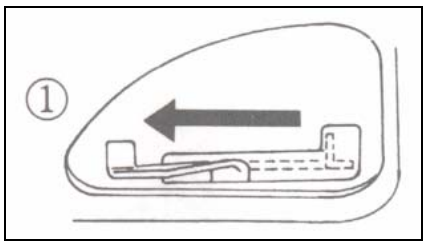
- Turn the fuel valve to the "On" position (Figure 2).

Figure 2. *Fuel Valve*



- Place the choke lever in the "CHOKE" position (Figure 3.).

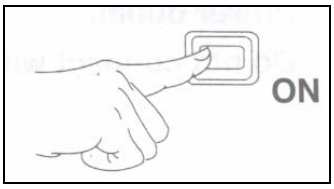
Figure 3. *Choke Positions*



CAUTION! NEVER start or stop the unit with electrical loads connected AND with the connected devices turned ON.

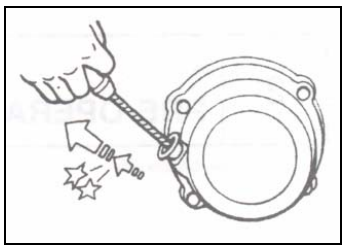
Figure 4. *Engine switch on position*

- Turn the engine switch to the "ON" position (Figure 4).



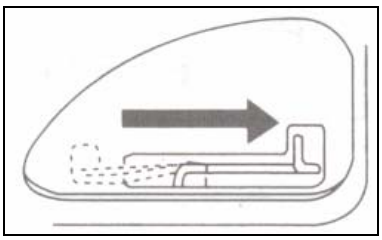
- Pull the recoil starter grip lightly until resistance is felt, then pull hard. Warning: Do not allow the starter grip to snap back against the engine. Return it gently (Figure 5.).

Figure 5. *Recoil starting rope*



Push the choke rod to the "OPEN" position as the engine starts up (Figure 6).

Figure 6. *Putting choke rod to "OPEN"*



CONNECTING ELECTRICAL LOADS AND ELECTRICAL CAPACITY

After starting the generator, let the engine warm up after connecting electrical loads to it. Do not have any electrical loads connected before starting the generator.

Make sure all electrical devices are 60 Hz devices. Do not connect 50 Hz devices to the generator.

Do not connect 3-phase loads to the generator.

Do not overload the generator. Before beginning your work, you must verify that the rated (running) and surge (starting) watts for the items you will power at the same time are within the generators operating capacity. Please refer to the following Table 1. for wattage / amperage ratings. Also, to prolong the life of your generator, sequentially add loads and permit the generator to stabilize before adding another load. Never exceed the capacity of the generator.

Estimate how many surge (starting) watts you will need. Surge wattage is the short burst of power needed to start electric motor-driven tools or appliances such as a circular saw or refrigerator. Below is an example of how the rated and surge wattage can be estimated.

Example:

Tool or Appliance	Rated (Running) Watts	Additional Surge (Starting) Watts
Television	500	500
Light (75 Watt)	75	20
Total	575 Total Running Watts	520 Highest Surge Watts

Total Rated (Running) Watts = 575
Highest Additional Surge Watts = 520
Total Generator Output Required = 1095

Table 1. *Wattage reference chart*

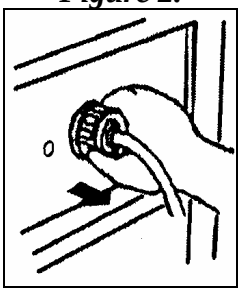
Tool or Appliance	Rated (Running) Watts	Additional Surge (Starting) Watts
Essentials		
Light Bulb – 75 watt	75	-
Freezer	500	500
Heating/Cooling		
Window Fan	300	600
Family Room		
DVD / CD Player	100	-
VCR	100	-
Stereo Receiver	450	-
27 " Color Television	500	-
Personal Computer w/17" monitor	800	-
Other		
Security system	180	-
AM / FM clock radio	300	-
½ HP Garage door opener	480	520
DIY / Job Site		
Halogen work light	1000	-
Reciprocating Saw	960	960
½ HP Electric Drill	1000	1000

Note: wattages listed are only approximates. Check your electrical device for actual wattage.

STOPPING THE ENGINE

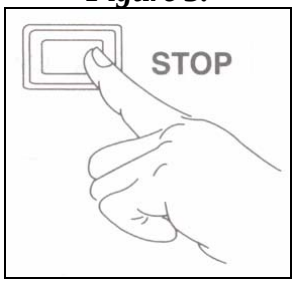
- Unplug all the electrical loads from the generator panel (Figure 2.).

Figure 2.



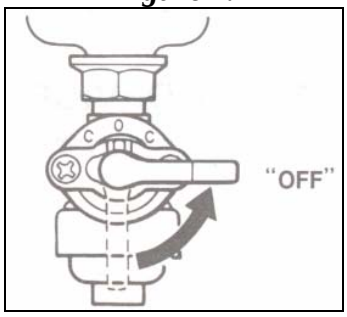
- Let the engine run at no-load for several minutes to stabilize the internal temperatures of engine and generator.
- Turn the engine switch to the "OFF" position (Figure 3.).

Figure 3.



- Turn the fuel valve to the "OFF" position (Figure 4.).

Figure 4.



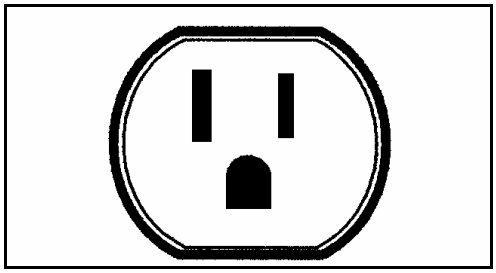
RECEPTACLES

AC OUTPUT

This generator is equipped with the following receptacles:

120 Volt AC, 15 Amp Receptacle

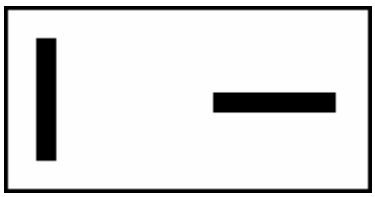
Figure 5.1 *120 Volt, 15 Amp Receptacle*



Note: Please be sure to use electrical cords that support the amount of wattage being used. The electrical cords should be able to handle 20 Amps of current at 125 Volts.

DC OUTPUT

Figure 5.2
VDC: 12V~17V, Amp: 0A~5A



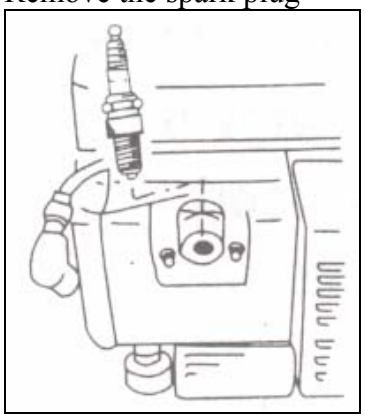
MAINTENANCE

Below is a maintenance schedule for the generator.

Items	Remarks	Every 50 hrs. or every month	Every 150 hrs. or every months
Spark plug:	Remove carbon. Adjust gap. Replace if necessary.	●	
Air filter:	Clean Replace if necessary.		●
Fuel filter:	Clean Replace if necessary.		●
Decabonigation	Clean Replace if necessary.		●

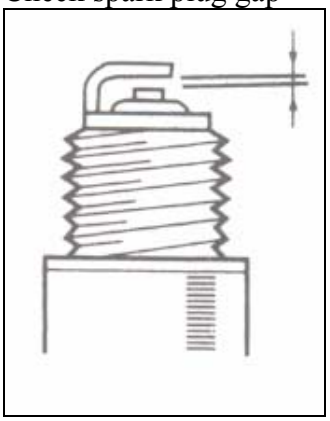
SPARK PLUG

- Remove the spark plug



- Remove the carbon deposits

- Check for discoloration. Standard is tan in color.
- Check spark plug gap



Gap measurements
.7~.8 mm (.028~.031 inches)

If spark plug needs to be replaced, use NGK Brand: **BPR6ES**

SPARK ARRESTER

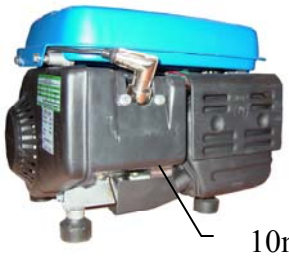
If the generator has been running, the muffler will be very hot. Allow it to cool before proceeding.

The spark arrester must be serviced every 100 hours of operation to maintain its efficiency.

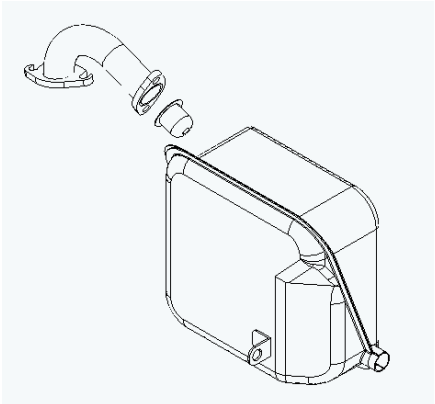
Follow these procedures to clean the spark arrester:

- Remove the 8 mm bolt as shown.

- Remove the two 10 mm bolts from the intake pipe and muffler as shown.



- Remove the gasket and the spark arrestor from the inside of the muffler.



- Use a brush to remove carbon deposits from the spark arrester screen.

- Inspect the screen for breaks or tears and replace it if necessary.
- Check the muffler gasket; replace it if damaged. Reinstall the muffler gasket, the spark arrester, the muffler and muffler protector in the reverse order of removal.

CLEANING THE GENERATOR

Generator maintenance consists of keeping the unit clean and dry. Be sure to store the unit in a clean and dry environment, where it will not be exposed to excessive dust, dirt, moisture or any corrosive vapors. Cooling slots should always be clean and free from clogs.

Note: Do not use a garden hose to clean the generator. Water can enter the fuel and intake system and cause problems. In addition, if water and dirt buildup on the generators internal windings, the resistance of these windings will decrease.

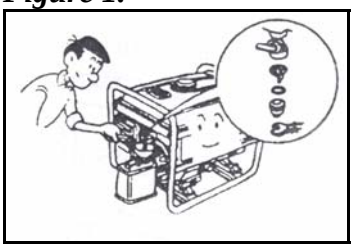
- To clean the generator, use a damp cloth to wipe the exterior surfaces.
- Use a soft bristle brush to loosen caked on dirt of oil.
- Use a vacuum cleaner to pick up loose dirt and debris.
- Compressed air (not to exceed 25 psi) may be used to blow away dirt.

STORAGE

The generator should be started at least once every week. If this cannot be done and you must store the unit more than 30 days, please follow the following guidelines.

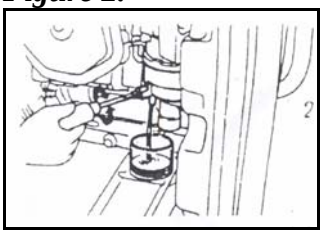
- Close the fuel valve; drain the fuel from the fuel tank (Figure 1).

Figure 1.



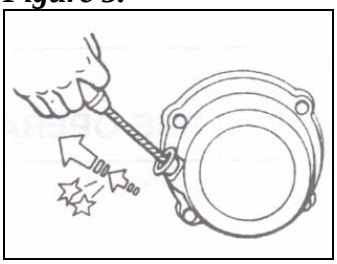
- Drain the fuel from the carburetor (Figure 2.).

Figure 2.



- Pull the starter grip carefully until resistance is felt (Figure 5.).

Figure 5.



Store the generator in a clean area.

PARTS LISTINGS

GENERATOR

Figure 1. *Exploded view of entire generator*

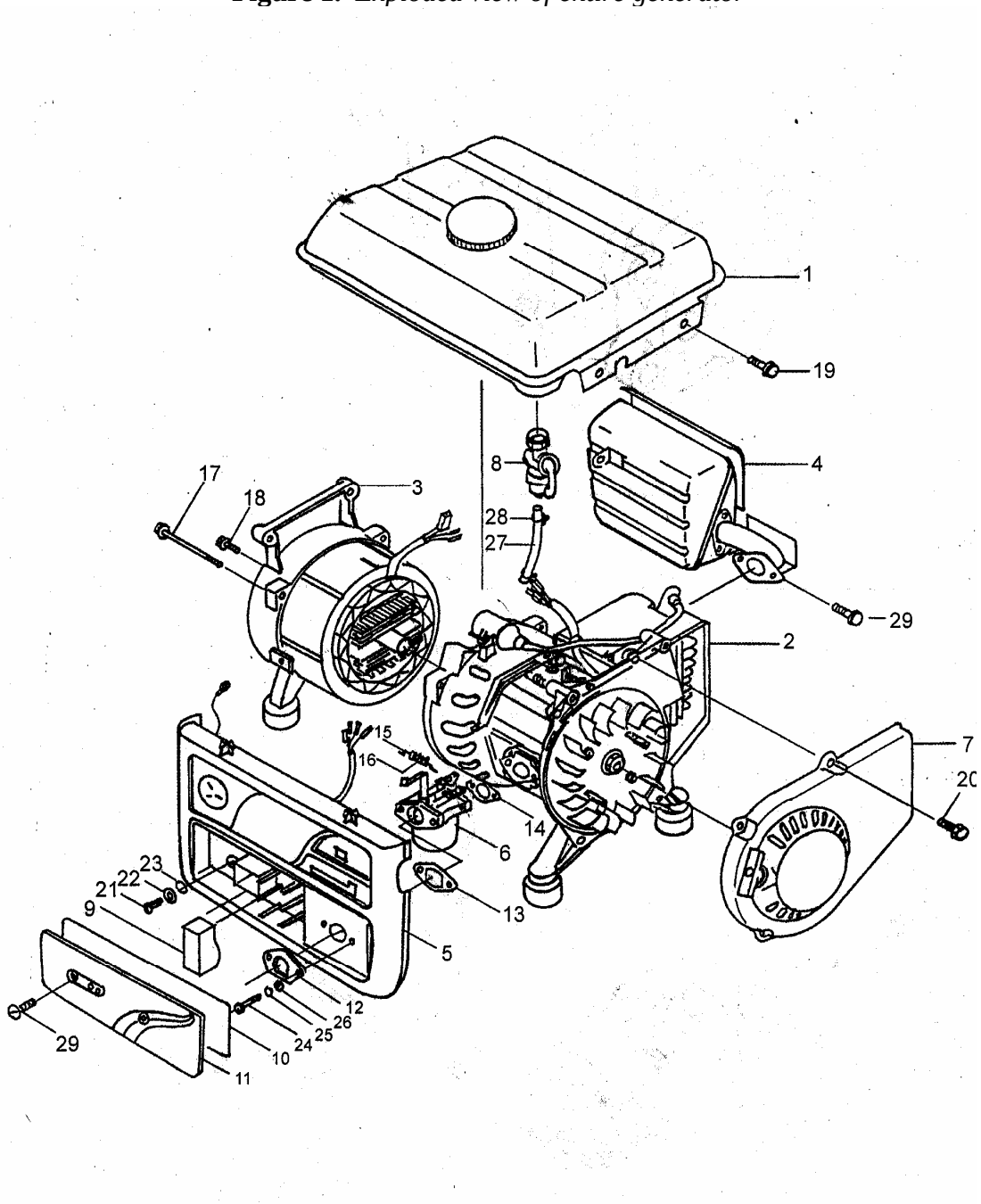


Table 1. *Please refer to figure 1.*

NUMBER	DESCRIPTION	PART NUMBER	QTY.
1	Fuel tank	ETQ1200TG1	1
2	Engine	ETQ1200TQ2	1
3	Generator	ETQ1200TG3	1
4	Exhaust pipe	ETQ1200TG4	1
5	Front panel	ETQ1200TG5	1
6	Carburetor	ETQ1200TG6	1
7	Starting cover assembly	ETQ1200TG7	1
8	Fuel control valve	ETQ1200TG8	1
9	Air filter	ETQ1200TG9	1
10	Seal ring dia.190	ETQ1200TG10	1
11	Air filter cover	ETQ1200TG11	1
12	Fixed plate	ETQ1200TG12	1
13	Gasket	ETQ1200TG13	1
14	Gasket	ETQ1200TG14	1
15	Pilot adjusting rod	ETQ1200TG15	1
16	Pilot adjusting spring	ETQ1200TG16	1
17	Screw 6x85		1
18	Screw M6x14		1
19	Screw M6X14		4
20	Screw M6x14		4
21	Screw M6x20		1
22	Spring washer dia.6		1
23	Screw 6x65		2
24	Gasket dia.6		1
25	Spring washer dia.6		1
26	Gasket dia.6		1
27	Fuel pipe	ETQ1200TG17	1
28	Fuel pipe clip		2
29	Screw 6x20		2

GENERATOR ENGINE

Figure 2. *Exploded view of generator engine.*

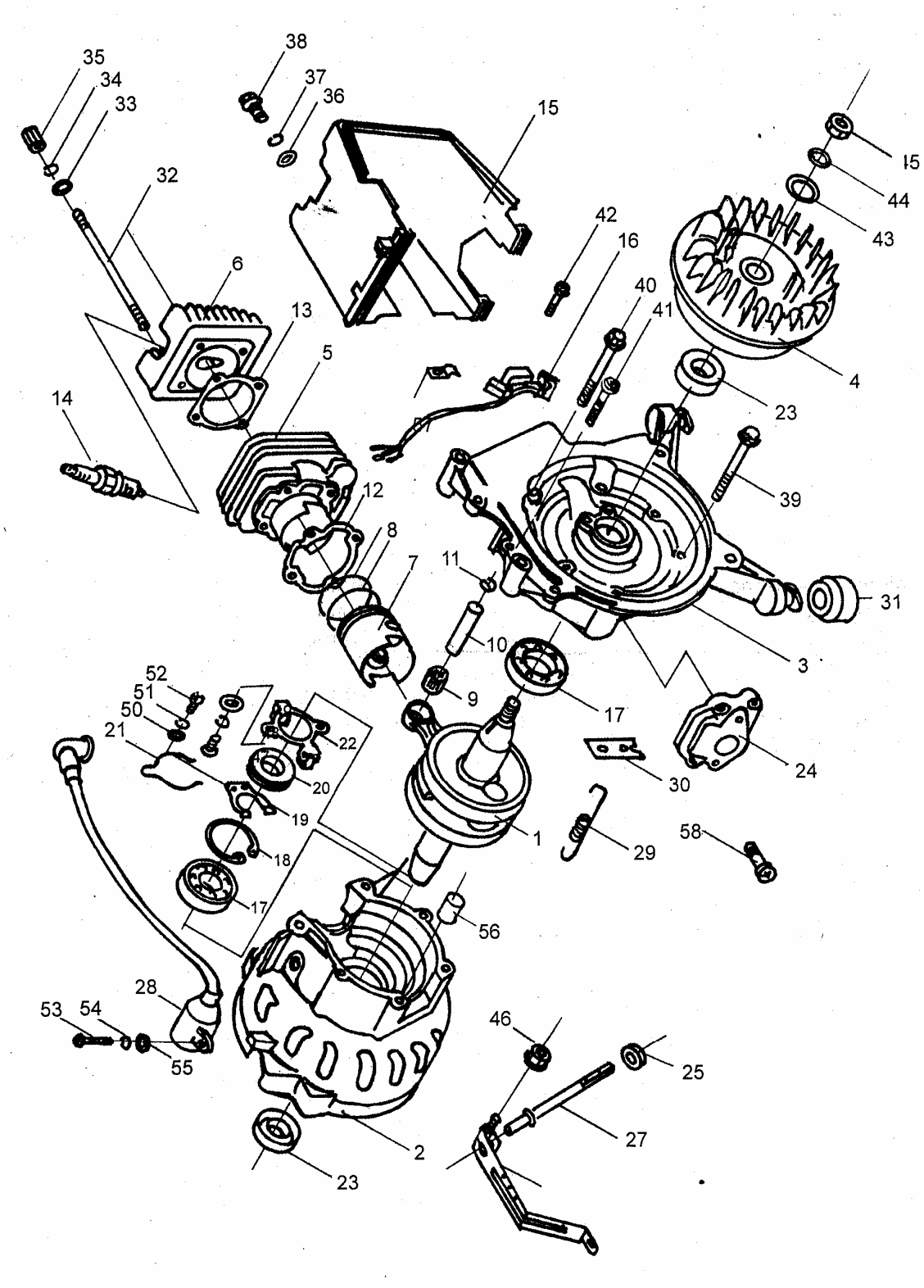


TABLE 2. *Please refer to figure 2 for diagram*

NUMBER	DESCRIPTION	PART NUMBER	QTY.
1	Crankshaft	ETQ1200TG18	1
2	Crankcase (left)	ETQ1200TG19	1
3	Crankcase (right)	ETQ1200TG20	1
4	Flywheel	ETQ1200TG21	1
5	Cylinder sleeve	ETQ1200TG22	1
6	Cylinder head	ETQ1200TG23	1
7	Piston	ETQ1200TG24	1
8	Piston ring	ETQ1200TG25	2
9	Needle bearing	ETQ1200TG26	1
10	Piston pin	ETQ1200TG27	1
11	Spring leaf / piston pin	ETQ1200TG28	2
12	Gasket (cylinder bottom)	ETQ1200TG29	1
13	Gasket (cylinder head)	ETQ1200TG30	1
14	Spark Plug	ETQ1200TG31	1
15	Cylinder air shroud	ETQ1200TG32	1
16	Magneto	ETQ1200TG33	1
17	Bearing 104	ETQ1200TG34	1
18	Speed regulating fork dia.47	ETQ1200TG35	1
19	Speed regulating fork	ETQ1200TG36	1
20	Slip ring	ETQ1200TG37	1
21	Slip ring	ETQ1200TG38	1
22	Stand	ETQ1200TG39	1
23	Oil seal dia. 20	ETQ1200TG40	2
24	Speed adjusting level	ETQ1200TG41	1
25	Oil seal dia. 6	ETQ1200TG42	1
26	Speed adjusting level	ETQ1200TG43	1
27	Shifter	ETQ1200TG44	1
28	High voltage set	ETQ1200TG45	1
29	Speed governing spring	ETQ1200TG46	1
30	Speed governor gasket	ETQ1200TG47	1
31	Shockproof boot	ETQ1200TG48	2
32	Screw 6x113	ETQ1200TG49	2
33	Gasket dia. 6	ETQ1200TG50	1
34	Spring washer dia. 6	ETQ1200TG51	2
35	Nut M6x15	ETQ1200TG52	2
36	Gasket dia. 6	ETQ1200TG53	2
37	Spring washer dia 6	ETQ1200TG54	2
38	Screw M6x14		2
39	Screw M6x45		4
40	Screw M6x50		2
41	Screw M6x40		1
42	Screw M6x18		2
43	Gasket dia 10	ETQ1200TG55	1
44	Spring washer dia. 6	ETQ1200TG56	1

45	Nut M10	ETQ1200TG57	1
46	Nut M6	ETQ1200TG58	1
47	Screw M6x12	ETQ1200TG59	2
48	Spring washer dia. 6	ETQ1200TG60	2
49	Gasket dia. 6	ETQ1200TG61	2
50	Gasket dia. 3	ETQ1200TG62	2
51	Spring washer dia. 3	ETQ1200TG63	2
52	Screw M3	ETQ1200TG64	2
53	Screw M6x20		1
54	Spring washer dia. 6		1
55	Gasket dia. 6		1
56	Locating ring dia. 10		2
57	Locating sheet		1
58	Screw M6x20		4

RECOIL STARTER ASSEMBLY

FIGURE 3. *Recoil starter assembly*

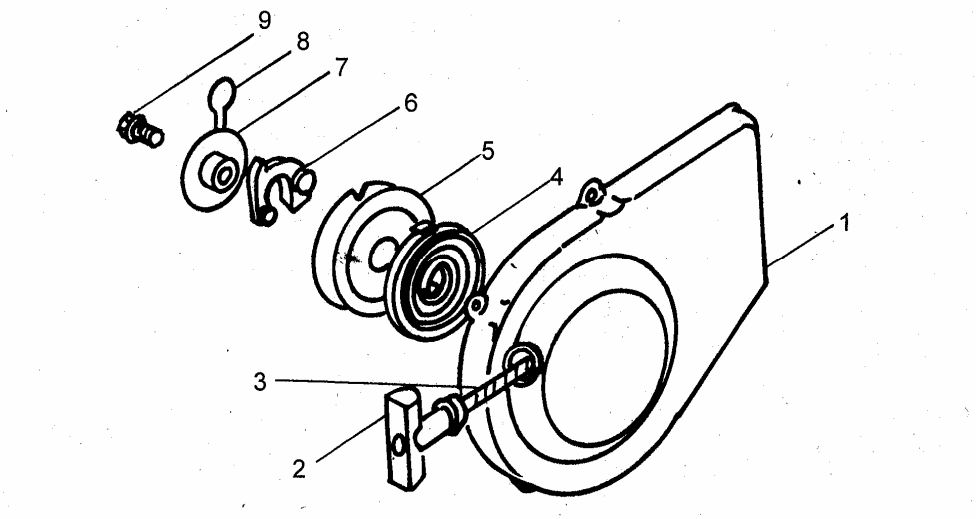


TABLE 3. *Please refer to figure 3 for diagram.*

NUMBER	DESCRIPTION	PART NUMBER	QTY.
1	Starting cover	ETQ1200TG65	1
2	Starting handle	ETQ1200TG66	1
3	Starting rope	ETQ1200TG67	1
4	Torsional spring	ETQ1200TG68	1
5	Claw	ETQ1200TG69	1
6	Bearing plate	ETQ1200TG70	1
7	Drive plate	ETQ1200TG71	1
8	Spring clip	ETQ1200TG72	1
9	Screw M6X12		1

ELECTRICAL PANEL

FIGURE 4. *Electrical panel assembly*

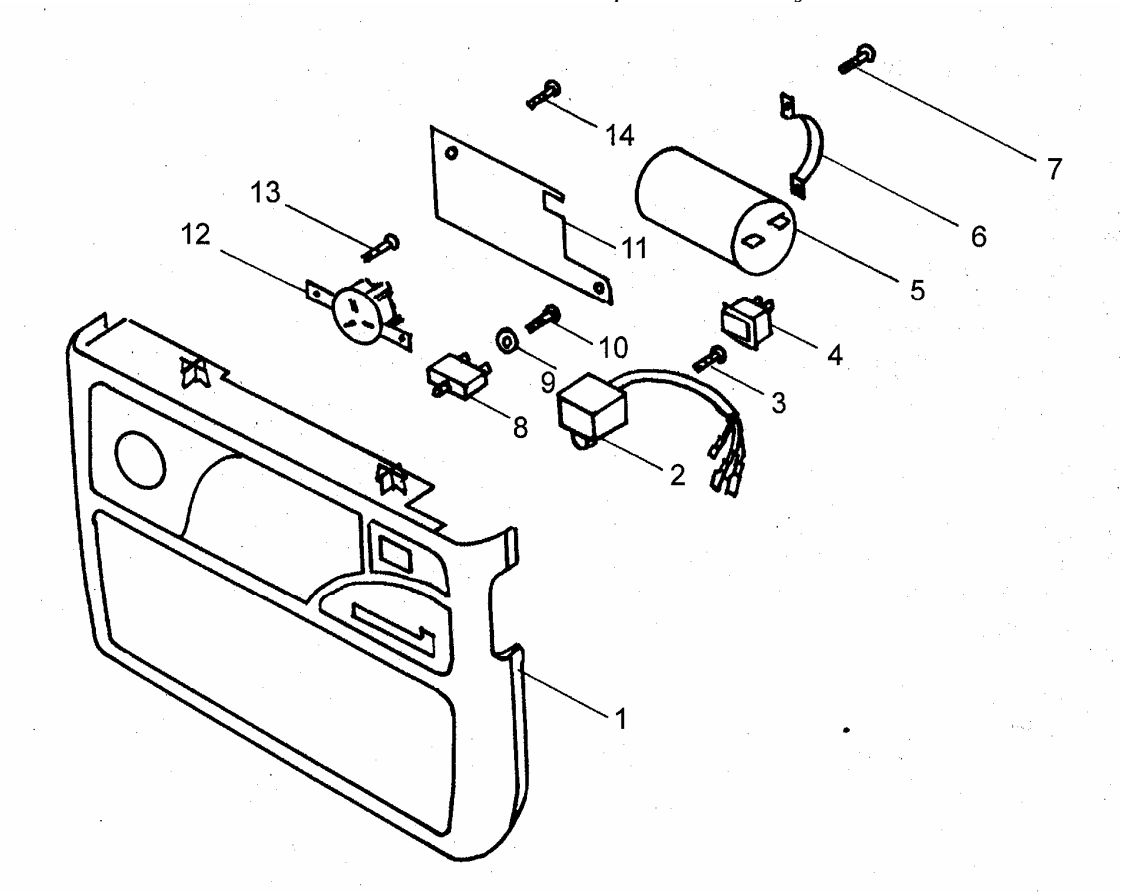


TABLE 4. *Please refer to figure 4 for diagram.*

NUMBER	DESCRIPTION	PART NUMBER	QTY.
1	Front panel	ETQ1200TG73	1
2	Igniter	ETQ1200TG74	1
3	Screw M4x20		1
4	On/Off switch	ETQ1200TG75	1
5	Capacitor	ETQ1200TG76	1
6	Capacitor clip	ETQ1200TG77	1
7	Screw M4x10		2
8	Thermal circuit breaker	ETQ1200TG78	1
9	Washer		1
10	Screw M4x10		1
11	Cover plate	ETQ1200TG79	1
12	Receptacle	ETQ1200TG80	1
13	Screw M4x10		2
14	Screw M4x10		2

AIR INLET VALVE

FIGURE 5. *Air inlet valve*

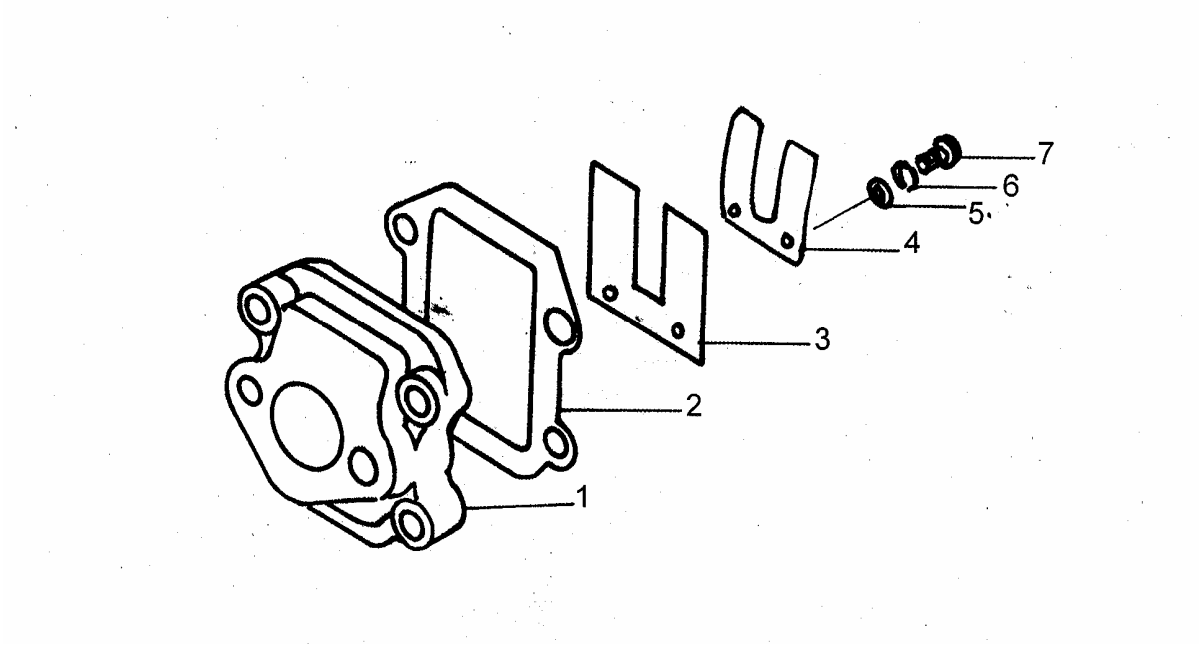


TABLE 5. *Please refer to figure 5 for diagram.*

NUMBER	DESCRIPTION	PART NUMBER	QTY.
1	Air inlet valve mount	ETQ1200TG81	1
2	Seal / Gasket	ETQ1200TG82	1
3	Valve leaf	ETQ1200TG83	1
4	Limiter	ETQ1200TG84	1
5	Washer		2
6	Spring washer		2
7	Screw M3x10		2

GENERATOR HEAD

FIGURE 6. *Exploded view of generator head*

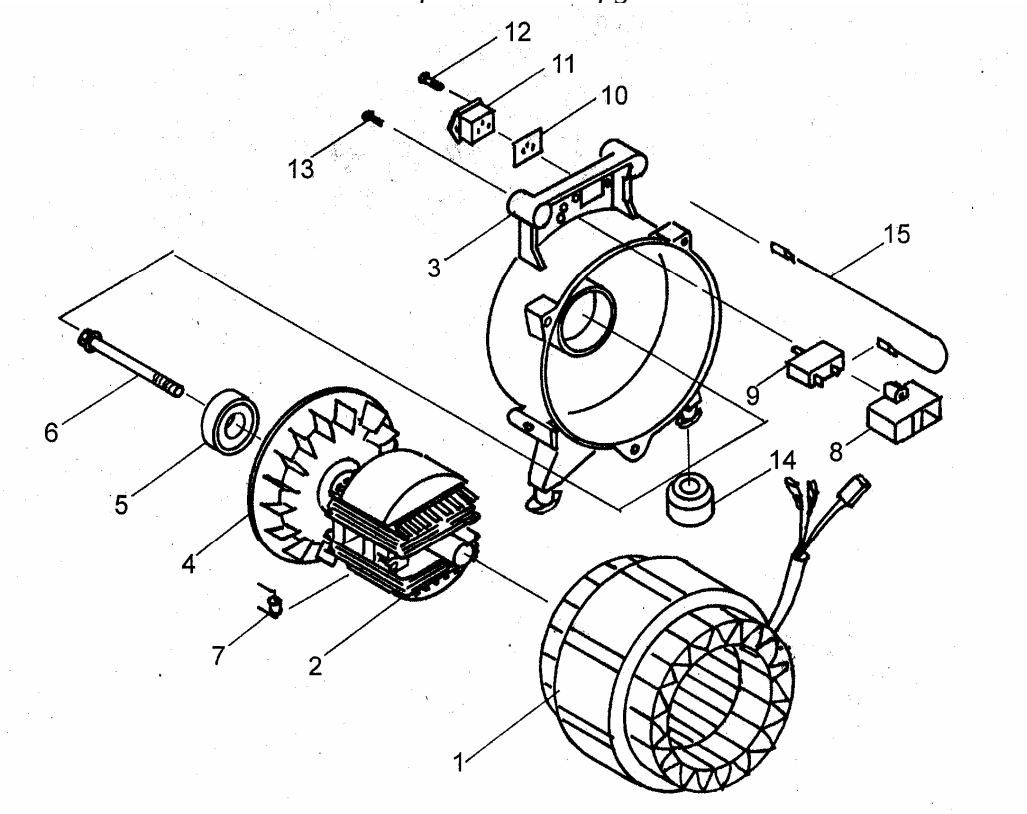
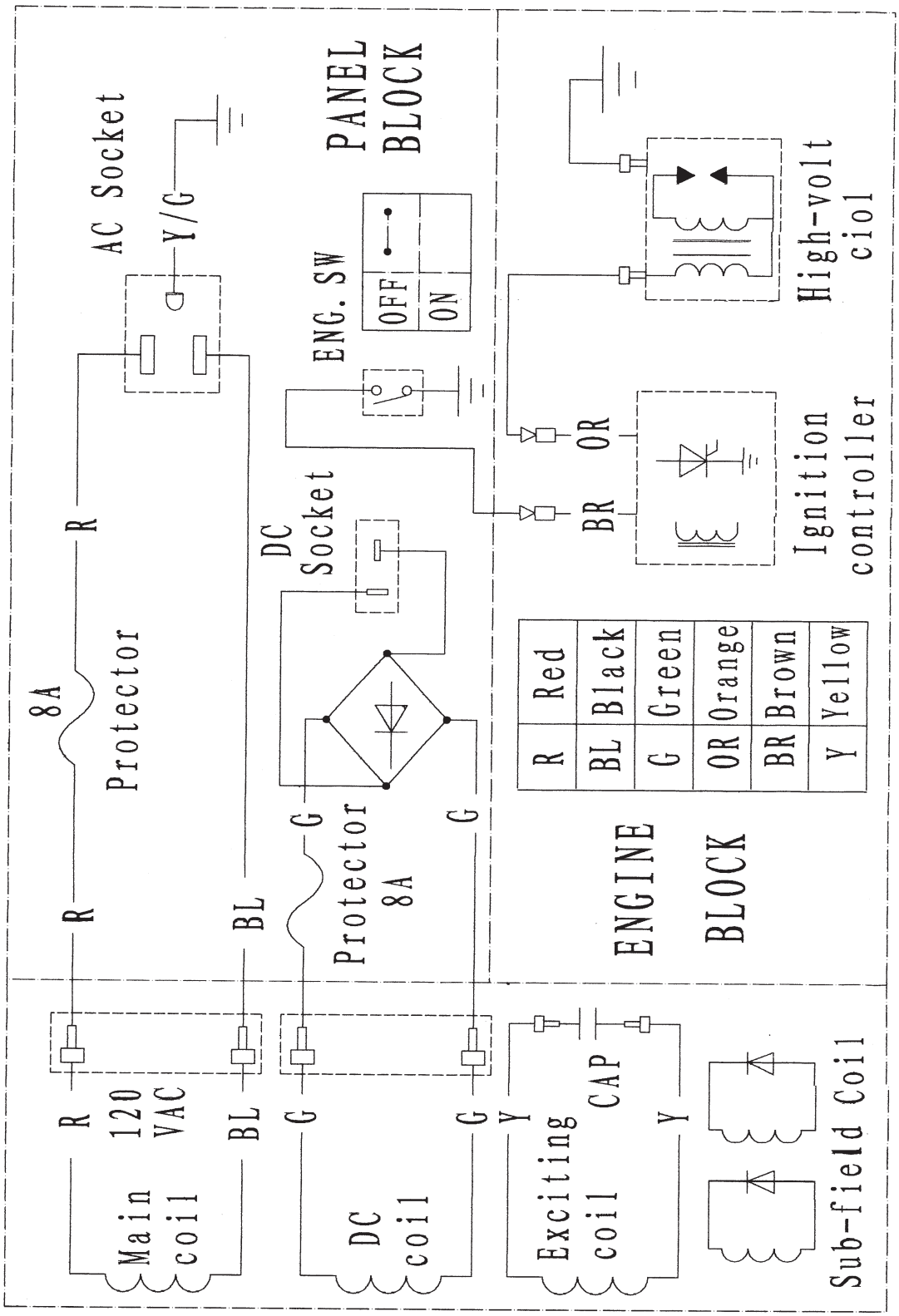


TABLE 6. *Please refer to figure 6 for diagram.*

NUMER	DESCRIPTION	PART NUMBER	QTY.
1	Stator	ETQ1200TG85	1
2	Rotor	ETQ1200TG86	1
3	Rear cover	ETQ1200TG87	1
4	Fan	ETQ1200TG88	1
5	Bearing 203 dia. 43	ETQ1200TG89	1
6	Screw M8x150	ETQ1200TG90	1
7	6A Diode	ETQ1200TG91	1
8	DC circuit breaker mount	ETQ1200TG92	1
9	DC circuit breaker	ETQ1200TG93	1
10	Rectifier	ETQ1200TG94	1
11	DC receptacle	ETQ1200TG95	1
12	Screw M3x10		1
13	Screw M3X10		
14	Shockproof rubber boot	ETQ1200TG96	2
15	Wire		1

WIRING DIAGRAM



TROUBLESHOOTING

Problem	Cause	Solution
Engine will not start or runs rough when started	1. Engine switch set to "OFF". 2. Fuel valve is in the "Off" position. 3. Dirty air cleaner. 4. Out of gasoline mix. 5. Bad gasoline mix. 6. Loose or disconnected spark plug wire. 7. Bad spark plug. 8. Water in gasoline. 9. Overchoking. 10. Low oil level. 11. Excessive rich fuel mixture. 12. Intake valve stuck open or closed. 13. No compression	1. Set switch to "On". 2. Turn fuel valve to the "On' position. 3. Clean or replace air cleaner. 4. Fill fuel tank. 5. Drain gas tank and fill with fresh fuel 6. Connect wire to spark plug. 7. Replace spark plug. 8. Drain gas tank: fill with fresh fuel. 9. Set choke to Run position. 10. Fill crankcase to proper level. 11. Contact your local service dealer 12. Contact your local service dealer. 13. Contact your local service dealer.
Engine running but no AC output.	1. Circuit breaker open. 2. Defective cord or poor connection. 3. Connected device is faulty. 4. Fault in generator.	1. Reset circuit breaker. 2. Check and repair. 3. Connect a good condition device. 4. Contact your local service dealer.
Engine runs good but gets bogged down when loads are connected.	1. Electrical short in connected load. 2. Generator is overloaded. 3. Engine speed too low. 4. Generator circuit shorted.	1. Disconnect shorted electrical load. 2. Refer to "connecting electrical loads and electrical capacity". 3. Contact your local service department 4. Contact your local service department
Engine lacks power.	1. Load is too high. 2. Dirty air filter. 3. Engine needs to be serviced.	1. See "connecting electrical loads and electrical capacity". 2. Replace air filter. 3. Contact your local service dealer.
Engine shuts down during operation.	1. Out of gasoline 2. Problem with engine	1. Fill fuel tank 2. Contact your local service dealer.
Engine "hunts" or falters.	1. Choke is opened too soon. 2. Carburetor is running too rich or too lean.	1. Move choke to halfway position till engine runs smoothly. 2. Contact your local service dealer.

LIMITED WARRANTY

Eastern Tools & Equipment, Inc. will repair or replace, free of charge, any part or parts of the generator that are defective in material or workmanship or both. Transportation charges on parts submitted for repair or replacement under this Warranty must be borne by purchaser. This warranty is effective for the time period and subject to the conditions provided for in this policy. For warranty service, find the nearest Authorized Service Dealer by contacting the place of purchase or Eastern Tools & Equipment, Inc. THERE IS NO OTHER EXPRESSED WARRANTY. IMPLIED WARRANTIES, INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR FROM PURCHASE, OR TO THE EXTENT PERMITED BY LAW ANY AND ALL IMPLIED WARRANTIES ARE EXCLUDED. LIABILITY FOR CONSEQUENTIAL DAMAGES UNDER ANY AND ALL WARRANTIES ARE EXCLUDED TO THE EXTENT EXCLUSION IS PERMITTED BY LAW. Some states do not allow limitations on how long an implied warranty lasts, and some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation and exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights, which vary from state to state.

Eastern Tools & Equipment, Inc.

WARRANTY PERIOD***

ENGINES	WITHIN U.S.A AND CANADA		OUTSIDE U.S.A. AND CANADA	
	CONSUMER USE	COMMERCIAL USE	CONSUMER USE	COMMERCIAL USE
GASOLINE GENERATOR	1 year	90 days	1 year	90 days

The warranty period begins on the date of purchase by the first retail consumer or commercial end user, and continues for the period of time stated in the table above. "Consumer use" means personal residential household use by a retail consumer. "Commercial use" means all other uses, including the commercial, income producing or rental purpose. Once the engine has experienced commercial use, it shall thereafter be considered as a commercial use engine for purpose of this warranty. **Engines use in competitive racing or commercial or rental tracks are not warranted.**

***A two-year warranty applies to the emission control system on engines certified by EPA and CARB.

IMPORTANT
"WARRANTY REGISTRATIONS IS NECESSARY TO OBTAIN LIMITED WARRANTY ON EASTERN TOOLS & EQUIPMENT, INC., ENGINES. THE WARRANTY REGISTRATION CARD MUST BE RETURNED WITHIN 15 DAYS OF PURCHASE FOR LIMITED WARRANTY TO BE VALID"

About Your Product Warranty

Eastern Tools & Equipment, Inc. welcomes warranty repair and apologizes to you for being inconvenienced. Any Authorized Service Dealer may perform warranty repairs. Most warranty repairs are handled routinely, but sometimes warranty service may be inappropriate. For example, warranty would not apply if an engine is damaged because of misuse, lack of routine maintenance, shipping, handling, warehousing and improper installation. Similarly, warranty is void if the serial number on the engine has been removed or if the engine has been altered or modified. If a customer differs with the decision of the Service Dealer, an investigation will be made to determine whether the warranty applies. Ask the Service Dealer to submit all supporting facts to his Distributor or the factory for review. If the distributor or the factory decides that the claim is justified, the customer will be fully reimbursed for those items that are defective. To avoid misunderstanding, which might occur between the customer and the dealer, listed below are some of the causes of engine failure that the warranty does not cover.

Normal wear:

Engines and generators, like all mechanical devices, need periodic parts service and replacement to perform well. Warranty will not cover repair when normal use has exhausted the life of a part of an engine.

Improper maintenance:

The life of an engine or your equipment depends upon the conditions under which it operates, and the care it receives. Some applications, such as tillers, pumps, and rotary movers, are very often used in dusty or dirty conditions, which can cause what appears to be premature, wear. Such wear, when caused by dirt, dust, spark pug cleaning grit, or other abrasive material that has entered the engine because of improper maintenance is not covered by warranty.

This warranty cover engine related defective material and/or workmanship only, and not replacement or refund of the equipment to which the engine may be mounted. Nor des the warranty extend to repairs required because of:

1. Problems caused by parts that are not original eastern tools & equipment, inc., parts.
2. Equipment controls or installations that prevent starting, cause unsatisfactory engine performance, or shorten engine life. (Contact equipment manufacturer.)
3. Leaking carburetor, clogged fuel pipes, sticking valves, or other damage, caused by using contaminated or stale fuel. (Use clean, fresh, lead-free gasoline.)
4. Parts which are scored or broken because an engine was operated with insufficient or contaminated lubricating oil, or and incorrect grad of lubricating oil (check oil level daily or after every 8 hours of operation. Refill when necessary and change at recommended intervals.) Engine damage may occur if oil level is not properly maintained. Read Operating & Maintenance Instructions.
5. Repair or adjustment of associated parts or assemblies such as clutches, transmissions, remote controls, etc., which are not manufactured by Eastern Tools & Equipment, Inc.
6. Damage or wear to parts caused by dirt, which entered the engine because of improper air filter maintenance, re-assembly, or use of a non-original air filter element or cartridge. Read Operating & Maintenance Instructions.
7. Parts damaged by over-speeding, or overheating caused by grass, debris, or dirt, which plugs or clogs the cooling fins, or flywheel are, or damaged caused by operating the engine in a confined area without sufficient ventilation.
8. Engine or equipment parts broken by excessive vibration caused by a loosen cutter blades unbalanced blades or loose unbalanced impellers, improper attachment of equipment to engine crankshaft, over speeding or other abuse in operation.
9. A bent or broken crankshaft, caused by striking a solid object with the cutter blade of a rotary lawn mower, or excessive v-belt tightness.
10. Routine tune-up or adjustment of the engine.
11. Engine or engine component failure, i.e., combustion chamber, valves, valve seats, valve guides, or burned starter motor winding, caused by the alternated fuels such as, liquefied petroleum, natural gas, altered gasoline's etc.

Warranty is available only through service dealers, which have been authorized by Eastern Tools & Equipment, Inc., please contact the place of purchase or Eastern Tools & Equipment, Inc. for a Service Dealer near you.

CALIFORNIA & USEPA EMISSION CONTROL WARRANTY STATEMENT

The U.S. Environmental Protection Agency (EPA), the California Air Resources Board (CARB) and Eastern Tools & Equipment, Inc. are pleased to explain the Federal and California Emission Control System Warranty on your small nonroad engine. In California, new small nonroad engines must be designed, built and equipped to meet the State's stringent and anti-smog standards. Eastern Tools & Equipment, Inc. must warrant the emission control system on your small nonroad engine for the periods of time listed above listed above provided there has been no abuse, neglect or improper maintenance of your small nonroad engine.

Your emission control system may include parts such as the carburetor, or fuel-injection system, the ignition system and catalytic converter. Also included may be hoses, belts, connectors and other emission-related assemblies.

Where a warrantable condition exists, Eastern Tools & Equipment, Inc. will repair your small nonroad engine at no cost to you including diagnosis, parts and labor.

OWNER'S WARRANTY RESPONSIBILITIES

As the small nonroad engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. Eastern Tools & Equipment, Inc. recommends that you retain all receipts covering maintenance on your small nonroad engine, but Eastern Tools & Equipment, Inc. cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.

As the small nonroad engine owner, you should, however, be aware that Eastern Tools & Equipment, Inc. may deny you warranty coverage if your; small nonroad or part thereof has failed due to abuse, neglect, improper maintenance or unapproved modifications.

You are responsible for presenting your small nonroad engine to Eastern Tools & Equipment, Inc. distribution center as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities or request warranty service you should contact either the place of purchase or Eastern Tools & Equipment, Inc., c/o Service Manager, Engine and Equipment Service Division.

IMPORTANT NOTE:

This warranty statement explains your rights and obligations under Emission Control system Warranty (ECS Warranty), which is provided to our by Eastern Tools & Equipment, Inc. pursuant to California law, Eastern Tools & Equipment, Inc. also provides to original purchasers of new Eastern Tools & Equipment, Inc. engines. Eastern Tools & Equipment, Inc. Limited Warranties for New engines & other Equipment associated with the engine (Eastern Tools & Equipment, Inc. Products Warranty), which is enclosed with all New Eastern Tools & Equipment, Inc. engines and products on a separate sheet. The ECS Warranty applies only to the emission control system of your new engine. To the extent that there is any conflict in terms between the ECS Warranty and the Eastern Tools & Equipment, Inc., Warranty, the ECS Warranty shall apply except in any circumstances in which the Eastern Tools & Equipment, Inc. Product Warranty may provide a longer warranty period. Both the ECS Warranty and the Eastern Tools & Equipment, Inc. product Warranty describe important right and obligations with respect to your new engine.

Eastern Tools & Equipment, Inc. at its location in Ontario, California can perform warranty service or any authorized service dealer near you. At the time of requesting warranty service, evidence must be presented of the date of sale to the original purchaser. The purchaser shall pay any charges for transporting the product to and from the place when the inspection and/or warranty preformed. The purchaser shall be responsible for any damage or loss incurred in connection with the transportation of any engine or any part(s) thereof submitted for inspection and/or warranty work.

If you have any questions regarding your warranty rights and responsibilities, you should contact Eastern Tools & Equipment, Inc.

PRODUCT REGISTRATION

For more efficient customer service, please fill out the information below and mail to Eastern Tools & Equipment, Inc. Product Warranty and Registration Division.

Model No._____ Engine Serial No._____ Purchase Date _____/_____/_____

Purchased from:

[ ] Retail Location [ ] Private Consumer [ ] Other_____

Name_____

Location

Address_____

Telephone (____)____-_____ Purchase Price_____

Purchased: [ ] New [ ] Used

Consumer Information:

Name_____ Telephone (____) ____ - _____

Street Address_____ Suite or Apt No._____

City_____ State_____ Zip Code_____

Province or

County_____

Are you a: [ ] Business [ ] Residence

Product Usage Information:

How often will you use this product?

[ ] Everyday [ ] Periodically [ ] Emergency Use Only [ ] Other

What type of application will you use this product in?

[ ] Heavy Commercial [ ] Moderate Commercial [ ] Light Commercial [ ] Tradeshows

[ ] Heavy Residential [ ] Moderate Residential [ ] Light Residential [ ] Camping/Backpacking

[ ] Other_____

Important information:
It is critical to your warranty that the original point of sales receipt the retained by current consumer, and in order to comply with Eastern Tools &Equipment Product Warranty statement you must return the registration card within 15 days of original purchase Product warranty is valid from original date of purchase.

Please mail the above card to: ***Eastern Tools & Equipment, Inc.***
111 Bluegrass Dr.
Norwalk, OH 44857